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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RODIGER KURTZ and ALFRED BUDIK

Appeal 2008-3768
Application 10/619,424
Technology Center 1700

Decided: November 21, 2008

Before EDWARD C. KIMLIN, LINDA M. GAUDETTE, and
KAREN HASTINGS *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 1-15 and 33¹. An oral hearing was held on October 22, 2008. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Claims 16-32 are also pending, but have been withdrawn from consideration as directed to a non-elected invention.

“The invention relates to a device for impregnating a paper or cardboard web” with “an impregnating agent, such as a starch solution.” (Spec. [0002].) According to the invention, a web is elastically compressed in a wide nip calender, i.e., the compression is temporary and reversed after application of an impregnating agent. (App. Br. 6, second paragraph (citations to Specification omitted).) A coating device which applies the impregnating agent is positioned relative to the wide nip calender such that elastic compression of the web is still present when the web enters the coating device. (*Id.*) “The web thus soaks up the impregnating agent, and an extensive penetration of the web with the impregnating agent is achieved without any high pressure being required from outside during the application of the impregnating agent.” (*Id.*)

Claims 1 and 33, the sole independent claims on appeal, are illustrative of the invention and are reproduced below:

1. A device for impregnating web with an impregnating agent, comprising:

a coating device structured and arranged to apply the impregnating agent to web; and

a wide nip calender located, with respect to a web travel direction, before said coating device, said wide nip calender comprising a circulating jacket and a back pressure element arranged to form a wide nip and an elastic compression of the web,

wherein a distance between said coating device and side wide nip calender is such that elastic compression of the web by said wide nip calender is still present when the web enters the coating device.

33. A device for impregnating web with an impregnating agent, comprising:

a coating device structured and arranged to apply the impregnating agent to the web; and

a wide nip calender located, with respect to a web travel direction, before said coating device, side wide nip calender comprising a circulating jacket and a back pressure element arranged to form a wide nip and an elastic compression of the web,

wherein said coating device comprises a film press.

The Examiner relies on the following prior art reference to show unpatentability:

Gron WO 01/98585 Dec. 27, 2001

Appellants request review of the Examiner's rejection of claims 1-15 and 33 under 35 U.S.C. § 103(a) as unpatentable over WO '585. According to Appellants, the Examiner failed to establish a prima facie case of obviousness because the Examiner did not explain the motivation to modify WO '585 to achieve the invention of claims 1 and 33.

ISSUE

The issue presented for our review is: have Appellants shown reversible error in the Examiner's determination that the claimed invention would have been prima facie obvious in view of WO '585?

We answer this question in the negative for the reasons discussed below.

FINDINGS OF FACT

- 1) According to WO '585, “[i]t is well known that by means of calendering it is possible to attain a desired quality, such as smoothness and gloss for the paper produced and processed at earlier stages. . . . On the other hand, it is possible to conduct the calendering

as a pre-treatment so that the desired properties can be attained on the surface of the paper for a treatment to be conducted at the next stage, for example coating.” (WO ‘585, p. 1, ll. 24-31.)

- 2) According to WO ‘585, “[w]hen precalendered paper is coated it has been noticed that problems are caused by the fact that the water used in the coating relaxes the changes produced in the paper in precalendering. The original shape of the fibres is restored and the fibres compressed in the calendering become ‘tubular’ again. As a result of this the surface of paper tends to become rougher again in connection with the coating.” (WO ‘585, p. 3, ll. 22-27.)
- 3) WO ‘585 states that under these circumstances, the surface of the paper can be made smoother by increasing nip pressure, but a drawback is that “the bulk of paper will suffer.” (WO ‘585, p. 3, ll. 32-35.) According to WO ‘585, surface properties of the paper can also be preserved by increasing the amount of coating agent; however, this is also undesirable. (WO ‘585, p. 4, ll. 5-7.)
- 4) WO ‘585 is directed “to a calendering method especially for precalendering” which eliminates the above-noted drawbacks of the prior art (WO ‘585, p. 1, ll. 4-5.) According to the method, a web is passed through a calendering nip “under a relatively low calendering pressure.” (WO ‘585, p. 4, ll. 23-25.) WO ‘585 states that “the fibres in the middle in the z-direction of the paper web may be left unaffected, wherein the bulkiness of paper is maintained.” (WO ‘585, p. 4, ll. 36-37.) After passing through the calendering nip, the web may be guided directly to a coating unit. (WO ‘585, p. 8, ll. 32-36.) WO ‘585 utilizes “a so-called long nip” (WO ‘585, p. 7, ll. 11-12)

- having a pressure determined by the mutual loading of a hard-faced roll and counter element, e.g., a shoe element (WO ‘585, p. 7, ll. 23-25). “The length of the nip is at least 50 mm, advantageously at least 70 mm.” (WO ‘585, p. 7, ll. 18-19.) The surface temperature in the nip is at least 200 °C (WO ‘585, p. 8, ll. 5-6) so that “the surface of the web is brought to a state in which the plastic deformation of fibres is permanent” (WO ‘585, p. 4, ll. 31-33; *see also*, p. 8, ll. 32-33).
- 5) Appealed claims 1 and 33 are directed to “[a] device for impregnating web with an impregnating agent” which includes a coating device and a wide nip calender. Both claims 1 and 33 include the limitation “said wide nip calender comprising a circulating jacket and a back pressure element arranged to form a wide nip and an elastic compression of the web.”
- 6) The Specification describes the compression stress in the wide nip as “relatively small compared to a compression stress that would exist in a nip between two rolls with otherwise unchanged force conditions.” (Spec. [0053].) The Specification further states that the wide nip “features a relatively large length in the travel direction of [the web], preferably between 50 and 700 mm.” (Spec. [0055].)
- 7) The Specification states that the web is “somewhat compressed” in the wide nip for the purpose of producing a “uniform density,” but does not take place to achieve a uniform thickness. (Spec. [0059].) “Thus, pressurization is limited such that flock areas are not crushed.” (Spec. [0059].)
- 8) According to Appellants’ Specification, “compression stresses that act on the web in the wide nip can be kept relatively small.” (Spec.

- [0021].) The Specification further states that the surface temperature of the wide nip is preferably adjustable to 200 °C or higher (Spec. [0013]), i.e., “at least to the plasticizing temperature of the fibers of the paper or cardboard web” (Spec. [0016]) so that “the fibers can no longer stand up after leaving the wide nip” (Spec. [0017]). (*See also*, Spec. [0052].)
- 9) Appellants concede that WO ‘585 discloses the invention as claimed “with the exception of a [sic] elastic compression of the web and the placement of the wide nip calender relative to the coating device such that the elastic compression of the web by the wide nip calender is still present when the web enters the coating device.” (App. Br. 9.)
- 10) Claim 33 does not include a limitation requiring that “elastic compression of the web . . . is still present when the web enters the coating device” (FF 9, *supra*).
- 11) Appellants have neither explained nor identified any disclosure in the Specification regarding how “a distance between [the] coating device and said wide nip calender” is determined “such that elastic compression of the web by [the] wide nip calender is still present when the web enters the coating device,” as required by claim 1. (*See* App. Br. and Reply Br.)
- 12) The Examiner asserts that it would have been obvious to one of ordinary skill in art at the time of the invention to have adjusted the pressure profile and nip length of the WO ‘585 calender, as well as the space between the calender and coating device to achieve elastic compression of the web as claimed in claims 1 and 33. (Ans. 4-5.)

- 13) The Examiner relies, inter alia, on WO ‘585, p. 4, l. 23-p. 5, l. 7, to support a finding that one of ordinary skill in the art would have understood that the WO ‘585 apparatus was capable of being operated to achieve different desired outcomes for a web. (Ans. 8.) Appellants do not dispute this finding. (*See Reply Br. 8-9.*)
- 14) Appellants also do not dispute the Examiner’s finding that one of ordinary skill in the art at the time of the invention would have understood that the apparatus of WO’585 is capable of elastically compressing a web (Ans. 8-9). (*See Reply Br. 6.*)
- 15) Appellants argue that one of ordinary skill in the art would not have been motivated to modify WO ‘585 to elastically compress a web.
- 16) Appellants argue that WO ‘585 teaches away from modifying the apparatus to elastically compress a web because WO ‘585 “expressly requires permanent *not* elastic compression of the web.” (App. Br. 15.) Appellants rely on WO ‘585, p. 1, ll. 17-19 and 26-27 as expressly requiring permanent compression of the web. (*See App. Br. 12 (“WO ‘585 expressly discloses that the nip calender presses the paper web into a final thickness with a fixed final density, permanent compression, not elastic compression, of the web occurs in the wide nip calender of WO ‘585 before applying a coating.”) and Reply Br. 9.*)
- 17) The portion of WO ‘585 relied on by Appellants to establish that the WO ‘595 calendering device permanently compresses the web is a background discussion of known calendering methods and problems associated therewith. (*See WO ‘585, p. 1-p. 4, l. 13.*)

PRINCIPLES OF LAW

During examination, claims terms must be given their broadest reasonable construction consistent with the specification. *In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (“[T]he PTO must give claims their broadest reasonable construction consistent with the specification. . . . Therefore, we look to the specification to see if it provides a definition for claim terms but otherwise apply a broad interpretation.”).

[W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

In re Schreiber, 128 F.3d 1473, 1478 (Fed. Cir. 1997) (*quoting In re Swinehart*, 439 F.2d 210, 213 (C.C.P.A.1971)).

“[A] reasonable expectation of success, not absolute predictability” supports a conclusion of obviousness *In re Longi*, 759 F.2d 887, 897 (Fed. Cir. 1985). While “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does . . . [an obviousness] analysis need not seek out precise teachings [in the prior art] directed to the specific subject matter of the challenged claim.” *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). As the Supreme Court has noted, “[i]f a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. *Id.* at 1740. “A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at 1742. *See also DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464

F.3d 1356, 1367 (Fed. Cir. 2006) (“Our suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense”).

A reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom. *In re Fritch*, 972 F.2d 1260, 1264-65 (Fed. Cir. 1992). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley* 27 F.3d 551, 553 (Fed. Cir. 1994).

ANALYSIS

Appellants argue that the Examiner reversibly erred in rejecting claims 1 and 33 because the Examiner did not explain the motivation to adjust the calender nip of WO ‘585 to provide an elastic compression of the web. (FF 15.) We are not persuaded by this argument because it is based on Appellants’ unsupported finding that the WO ‘585 calender is designed to produce “permanent *not* elastic compression of the web” (FF 16). Rather, we are in agreement with the Examiner that WO ‘585 reasonably appears to disclose an apparatus having the same structural elements, arranged in the same manner as Appellants’ claimed device. WO ‘585 discloses substantially the same operating conditions employed by Appellants. (*Compare* FF 4 with FF 6-8.) Therefore, the Examiner had a reasonable basis to conclude that the WO ‘585 apparatus could perform the claimed function of providing an elastic compression of the web. (FF 12, 13.) The burden was thus shifted to Appellants to demonstrate otherwise. *See*

Schreiber, 128 F.3d at 1478. Appellants have not presented persuasive arguments or evidence to meet this burden. (*See* FF 14, 17.)

We likewise find that the Examiner provided a reasonable basis to conclude that it would have been obvious to have positioned the calender and coating device of the WO ‘585 at a distance “such that elastic compression of the web by the wide nip calender is still present when the web enters the coating device” as recited in appealed claim 1 (*see* FF 10). (*See* FF 12, 13.) In particular, we agree with the Examiner that one of ordinary skill in the art would have possessed the requisite skills and knowledge to adjust the pressure profile and nip length of the WO ‘585 calender, as well as the space between the calender and coating device to achieve different desired outcomes for a web. (*See generally*, FF 1-4.) Appellants have not provided any arguments or evidence to refute the Examiner’s finding that optimizing the distance between the WO ‘585 calender and coating device would have been obvious. (*See* FF 11.)

Appellants also argue that the Examiner’s Answer fails to comply with the requirements set forth in MPEP § 1207.02. Failure to comply with an MPEP provision is not a matter appealable to the Board. Moreover, MPEP §1207.02 merely sets forth *guidelines*, not requirements for compliance with 37 C.F.R. § 41.39. *See* MPEP §1207.02 (“The answer *should contain* a response to the allegations or arguments in the brief.”) (emphasis added).

CONCLUSION

Appellants have not shown reversible error in the Examiner’s determination that the claimed invention would have been *prima facie* obvious in view of WO ‘585.

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ORDER

The decision of the Examiner rejecting claims 1-15 and 33 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

PL Initial:
sld

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